

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 15

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte JAMES R. SISK and JOHN F. McHALE

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Appeal No. 2004-0070  
Application No. 10/047,529

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ON BRIEF

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Before THOMAS, RUGGIERO, and BLANKENSHIP, Administrative Patent Judges.  
BLANKENSHIP, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 1-21, which are all the claims in the application.

We affirm.

### BACKGROUND

The invention is directed to digital subscriber line (xDSL) communications, and in particular apparatus and methods for testing whether a telephone line can support xDSL communications. Claim 10 is reproduced below.

10. A method for local loop integrity testing of digital subscriber line (xDSL) communications, the method comprising:

initiating a test of a local loop telephone line by transmitting a test signature from a first point on the local loop telephone line, the local loop telephone line forming a continuous electrically conductive path without intermediate components between the first point and a second point;

receiving the test signature at the second point on the local loop telephone line;

evaluating the received test signature at the second point to determine whether the local loop telephone line can support xDSL communication; and

indicating whether the telephone line can support xDSL communication.

The examiner relies on the following references:

Soderberg et al. (Soderberg)	5,066,139	Nov. 19, 1991
Bliven et al. (Bliven)	5,111,497	May 5, 1992
Bjork et al. (Bjork)	5,128,619	Jul. 7, 1992
Siu et al. (Siu)	5,528,661	Jun. 18, 1996
Emerson et al. (Emerson)	5,553,059	Sep. 3, 1996
Feiner et al. (Feiner)	5,579,369	Nov. 26, 1996
Needle	5,864,602	Jan. 26, 1999

Kahkoska et al. (Kahkoska)

6,002,671

Dec. 14, 1999

Claims 1, 2, 7, 9, 18, and 19 stand rejected under 35 U.S.C. § 103 as being unpatentable over Feiner in view of Emerson or Kahkoska.

Claims 3-6 and 20 stand rejected under 35 U.S.C. § 103 as being unpatentable over Feiner in view of Emerson and further in view of Bjork.

Claim 8 stands rejected under 35 U.S.C. § 103 as being unpatentable over Feiner in view of Emerson and further in view of Bliven or Soderberg.

Claims 10-12, 17, and 21 stand rejected under 35 U.S.C. § 103 as being unpatentable over Feiner in view of Siu.

Claims 13-16 stand rejected under 35 U.S.C. § 103 as being unpatentable over Feiner in view of Siu and further in view of Bjork.

We refer to the Final Rejection (Paper No. 4) and the Examiner's Answer (Paper No. 11) for a statement of the examiner's position and to the Brief (Paper No. 10) and the Reply Brief (Paper No. 12) for appellants' position with respect to the claims which stand rejected.

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OPINION

Appellants submit that the Section 103 rejection of claims 1, 2, 7, 9, 18, and 19 is in error because the cited references fail to teach or suggest the claimed invention.

Since appellants request that the claims be grouped together (Brief at 4), we select claim 1 as representative. See 37 CFR § 1.192(c)(7).

Appellants argue that Feiner teaches away from the invention with respect to the telephone line, as recited in claim 1, “forming a continuous electrically conductive path without intermediate components between the first point and a second point.” According to appellants, Feiner addresses the problem of establishing a communication session over a path having any number of unknown intermediate “facilities” carrying the communications, which may vary over time. In appellants’ view, Feiner specifically teaches away from testing of “pre-assigned or static communications paths,” referring to material in columns 1 and 6 of Feiner. (Brief at 5.)

Feiner relates to a technique for determining the type of facility that will be transporting a data communication. Col. 1, ll. 9-12. In the Background of the Invention section (col. 1), Feiner notes that various types of facilities are used for transporting data communications, which may include metallic, analog carrier, and digital carrier facilities. The data transport connection between network end-points may be a single facility or may be a combination of several facilities. In the case of a combination, the maximum data rate allocated to a customer is limited by the data rate of the facility having the smallest maximum data rate. A facility, or a combination of facilities, or a subset of facilities types, can be preassigned to transport data so that the facilities do not vary over time. However, such preassignment restricts network facility

management and may result in increased cost to the customer. Feiner recognizes the need for a technique for permitting greater data rates in a manner that would be “transparent” to an unrestricted network facility management scheme, and not likely to increase cost to the customer.

Feiner further describes a “prior art” arrangement (Fig. 1) that includes private branch exchanges (PBX) 101 and 102, connected via a facility connection 103. Facility connection 103 is essentially the same as that used in the system of Feiner (Fig. 2; col. 3, l. 1 et seq.). Connection 103 may include one or a combination of metallic, analog carrier or digital carrier facilities. The media used by the facilities may include wire, air, optical fiber, etc. For “purposes of discussion,” Feiner assumes that facility 103 forms part of the PSTN (public switched telephone network), or an equivalent private network, that can vary over time. Col. 2, ll. 25-43.

“A reference may be said to teach away when a person of ordinary skill, upon [examining] the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant.” Para-Ordnance Mfg. v. SGS Importers Int’l, 73 F.3d 1085, 1090, 37 USPQ2d 1237, 1241 (Fed. Cir. 1995) (quoting In re Gurley, 27 F.3d 551, 553, 31 USPQ2d 1130, 1131 (Fed. Cir. 1994)).

Feiner teaches that the system of the invention is suited for use in facilities that can vary over time. However, we find no warning in the reference, directed to the

artisan, that teaches against use with lines forming a continuous electrically conductive path without intermediate components between the first point and a second point, or with “pre-assigned or static communications paths.” Feiner touts the advantages of the system of the invention that allows greater data rates in a manner that would be “transparent” to unrestricted network facility management. While Feiner is directed to a system in which it is of no great consequence that the connections may vary over time, Feiner clearly conveys to the artisan that the system would also work with a single, preassigned line between network end-points. We thus are not persuaded that the references “teaches away” from the instant invention.

“The use of patents as references is not limited to what the patentees describe as their own inventions or to the problems with which they are concerned. They are part of the literature of the art, relevant for all they contain.” In re Heck, 699 F.2d 1331, 1333, 216 USPQ 1038, 1039 (Fed. Cir. 1983) (quoting In re Lemelson, 397 F.2d 1006, 1009, 158 USPQ 275, 277 (CCPA 1968)). Moreover, in a Section 103 inquiry “the fact that a specific [embodiment] is taught to be preferred is not controlling, since all disclosures of the prior art, including unpreferred embodiments, must be considered.” Merck & Co. v. Biocraft Labs., Inc., 874 F.2d 804, 807, 10 USPQ2d 1843, 1846 (Fed. Cir. 1989) (quoting In re Lamberti, 545 F.2d 747, 750, 192 USPQ 278, 280 (CCPA 1976)).

While the Feiner device is not limited to operation only with a telephone line forming a continuous electrically conductive path without intermediate components between the first point and a second point, the method of claim 1 does not exclude the use of a device that may have other, more general, applications.

Appellants also submit that the references fail to teach or suggest the “control unit” of claim 1, comprising a generation unit and an evaluation unit. (Brief at 6.) However, the examiner points out the corresponding units in Feiner. (Answer at 4.)

Moreover, Kahkoska, also applied against claim 1, relates to a test instrument and method for testing asymmetric digital subscriber lines (ADSL). ADSL operates by the use of transmission units communicating over twisted-pair telephone lines. Col. 1, ll. 1-62. As appellants note (Reply Brief at 3), DSL links use pre-assigned telephone lines between subscribers and loop termination equipment. In an ADSL circuit, the upstream and downstream data rates are different, making a digital loopback test unusable. The throughput of the circuit must thus be measured in both the upstream and downstream paths simultaneously, requiring a test instrument at each end of the circuit. Kahkoska col. 2, ll. 11-31.

The remote transmission unit 12 (Fig. 1) is connected to the customer premises end of twisted-pair telephone line 10. In the central office, each ADSL circuit terminates in a central transmission unit 18. Col. 3, l. 62 - col. 4, l. 28. Figure 2 provides a schematic drawing of test instrument 100 operating in conjunction with a remote test

instrument 104 to test an ADSL circuit 102. The test instrument 100 is connected to the remote transmission unit via a patch cord 106, which may represent an Ethernet connection. A similar patch cord 107 may connect the central office transmission unit with test instrument 104. Col. 4, ll. 29-44.

The throughput test first establishes communications between the test instrument and the remote test unit and coordinates sending of data traffic through the ADSL circuit at selected data rates. Data rates are incremented until the upper limit is determined, with the results formatted and displayed to the user. Col. 5, ll. 11-36. Test instrument 100 may execute an instrument control program to implement the method, and may further control the operation of test instrument 104 via commands sent over the ADSL circuit 102. Col. 5, ll. 41-45. The test instruments may be identical (col. 5, ll. 45-49), and may simultaneously generate upstream and downstream data traffic for testing (col. 6, ll. 46-52). Figure 4 depicts a simplified diagram of a typical test instrument, which includes a frame processor 120 to extract information from received frames, a traffic generator 126 to generate network traffic, and a display 132 to display the results of the throughput test. Col. 7, ll. 43-65. The remote and central transmission units may be incorporated into the test unit 100 and remote test instrument 104 to more directly characterize the twisted-pair telephone line. Col. 8, ll. 32-37.



We therefore disagree with appellants that the references fail to teach or suggest a control unit comprising a generation unit and an evaluation unit as set forth in instant claim 1, as each of Feiner and Kahkoska discloses a generation unit and an evaluation unit. In addition to the examiner's findings with respect to the references,<sup>1</sup> we find that Kahkoska discloses a control unit as claimed, at least in the description of simultaneous testing of upstream and downstream data traffic, with each of the test instruments generating a signal and evaluating a separate received signal. In addition, we fail to see, on this record, how claim 1 is not anticipated by the device and method described by Kahkoska. In any event, a claim that is anticipated is also obvious under 35 U.S.C. § 103; anticipation is the epitome of obviousness. See, e.g., Connell v. Sears, Roebuck & Co., 722 F.2d 1542, 1548, 220 USPQ 193, 198 (Fed. Cir. 1983); In re Fracalossi, 681 F.2d 792, 794, 215 USPQ 569, 571 (CCPA 1982); In re Pearson, 494 F.2d 1399, 1402, 181 USPQ 641, 644 (CCPA 1974).

It is not apparent why Kahkoska was not applied against other claims in the application (e.g., broader claim 10, which also appears to be anticipated). Not listing the reference in the rejections applied against claims depending from claims 1 and 18 appears to represent a mere oversight. In the event of further prosecution before the

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<sup>1</sup> We also note that Feiner discloses a plurality of test signatures (col. 5, ll. 4-10).

examiner, the examiner should reevaluate the scope of the claims presented in light of the teachings of Kahkoska.

Finally, appellants allege there is no teaching, suggestion, or motivation for the proposed combinations. (Brief at 6-7.) Even assuming that to be true, Feiner teaches, as we have noted, a plurality of test signatures, and the teachings further encompass the claimed telephone line which forms a continuous electrically conductive path. The “output device” of claim 1 requires no more than, for example, an LED that indicates proper transmission and reception over the data link. Although not expressly described in Feiner, the device must have some visible means of indicating to the user that the line can support the communication under test. Moreover, Kahkoska taken alone demonstrates the obviousness of instant claim 1.

Based on the foregoing, we are not persuaded that the evidence relied upon by the rejection fails to show prima facie unpatentability of the subject matter as a whole of representative claim 1. We sustain the Section 103 rejection of claims 1, 2, 7, 9, 18, and 19.

Appellants’ remarks relating to the remainder of the rejections rely on the alleged deficiencies of Feiner, or of Feiner and Emerson. We consider the position to be untenable, for the reasons previously expressed. Appellants’ only other arguments --

rather than addressing the examiner's findings in support of the combinations<sup>2</sup> -- consist of the bare assertions that the examiner has failed to show any teaching, suggestion, or reason to combine the references.

In any event, we will address the subject matter of representative claims. For claim 3, we need go no farther than the four corners of the Feiner reference. Feiner teaches determining the maximum rate at which data can be reliably transmitted (e.g., col. 5, ll. 4-9), and whether the connection is all digital (e.g., col. 4, ll. 50-64). The capacities for data rate and all digital communication are "physical characteristics," as broadly claimed, of the telephone line. With respect to representative claim 8, Feiner appears to necessarily include a display, at least to the extent of an LED. In any event, the rejection further relies on Bliven and Soderberg, with the references suggesting visual and/or audible indicators as to network status. Representative claim 10 does not require an output device or display, but the step of "indicating" whether the telephone line can support the communication. Whether or not Feiner is considered as necessarily including a visible indicator, Feiner expressly describes indicating whether the data link can support the desired communication (e.g., col. 5, ll. 51-54).<sup>3</sup>

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<sup>2</sup> The presence or absence of a motivation to combine references in an obviousness determination is a pure question of fact. In re Gartside, 203 F.3d 1305, 1316, 53 USPQ2d 1769, 1776 (Fed. Cir. 2000).

<sup>3</sup> Appellants have not argued that Feiner fails to suggest application to "xDSL" communication. Moreover, Feiner expressly describes that the invention may be implemented in communications applications different from the disclosed embodiments. Col. 6, ll. 54-55.

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Representative claim 13 requires no more than Feiner's description of determining the maximum rate at which data can be reliably transmitted, and whether the connection is all digital.

We therefore sustain all the Section 103 rejections applied against the claims.

#### CONCLUSION

The rejection of claims 1-21 under 35 U.S.C. § 103 is affirmed.

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No time period for taking any subsequent action in connection with this appeal  
may be extended under 37 CFR § 1.136(a).

AFFIRMED

JAMES D. THOMAS  
Administrative Patent Judge

JOSEPH F. RUGGIERO  
Administrative Patent Judge

HOWARD B. BLANKENSHIP  
Administrative Patent Judge

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